

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
13 October 2005 (13.10.2005)

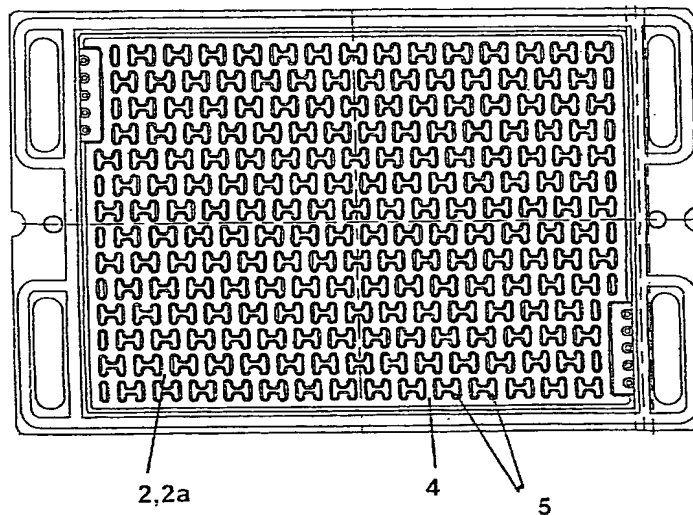
PCT

(10) International Publication Number
WO 2005/096421 A1

- (51) International Patent Classification⁷: **H01M 8/02**
- (21) International Application Number:
PCT/EP2005/003475
- (22) International Filing Date: 29 March 2005 (29.03.2005)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
10 2004.016 318.9 30 March 2004 (30.03.2004) DE
- (71) Applicant (for all designated States except US): **REINZ-DICHTUNGS-GMBH** [DE/DE]; Reinzstrasse 3-7, 89233 Neu-Ulm (DE).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): **SOMMER, Stefan** [DE/DE]; Schürmlinstrasse 27, 89073 Ulm (DE). **GAUGLER, Bernd** [DE/DE]; Kohlgasse 5, 89075 Ulm (DE). **KUNZ, Claudia** [DE/DE]; Neue Strasse 125, 89073 Ulm (DE). **STRÖBEL, Raimund** [DE/DE]; Gartenstr. 15, 89077 Ulm (DE). **SCHLEIER, Christian** [DE/DE]; Wasserburger Weg 123, 89212 Günzburg (DE). **SCHERER, Joachim** [DE/DE]; Sachsenweg 67, 89075 Ulm (DE).
- (74) Agent: **PFENNING MEINIG & PARTNER GBR**; Joachimstaler Str. 10-12, 10719 Berlin (DE).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).
- Published:
— with international search report

[Continued on next page]

(54) Title: A BIPOLAR PLATE AND ITS USE, AS WELL AS A METHOD FOR ITS MANUFACTURE AND AN ELECTRO-CHEMICAL SYSTEM CONTAINING THE BIPOLAR PLATE



(57) Abstract: The present invention relates to a bipolar plate (1) for electrochemical systems which contains a first plate (2) with a first flowfield (2a) for media distribution as well as a second plate (3) with a second flowfield (3a) for media distribution. This first plate in the region of the first flow field at least in regions comprises a plane surface section (4) from which discrete projections (5) distanced to one another project arranged in a distributed manner. Furthermore a method for manufacturing this bipolar plate is suggested as well as an electrochemical system which contains this bipolar plate. According to the invention it is possible in an inexpensive manner to manufacture a bipolar plate which permits the construction of fuel cells functioning with a low peripheral consumption (pumps, compressors) and which are safer with regard to their operation.

WO 2005/096421 A1



— before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.